

Conference Abstract

Can Lightning Strike Twice? The Reassembly of the Karnak Fulgurite at Museums Victoria

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Abstract

In 1959, the longest recorded specimen of fulgurite in Victoria was discovered in the sandhills of Karnak in Western Victoria, Australia. Measuring 1.5 metres in vertical length, the specimen was formed by a discharge of lightning penetrating and fusing the quartz sand along its path. Considering the high number of cloud-to-ground lightning strikes, it has been estimated that up to ten fulgurites may be formed globally per second Pasek and Block 2009. Despite this, fulgurites are a rare find, particularly ones of significant length.

The amorphous glass tubes created by lightning discharge are notoriously brittle and thin walled. Unequal contraction of the glass upon cooling produces fine cracks which weather over time, often resulting in the specimen breaking into segments. The Karnak fulgurite was systematically extracted from the ground segment by segment and reassembled for display in the museum, where it remained on exhibition from the early 1960s until 1990 Beasley 1964.

When removed from display, the Karnak fulgurite was accidentally fractured into hundreds of pieces. For nearly 30 years it has remained fragmented and spread across multiple vials in the collection. The level of detail provided in field notes, still images and archives from the time of its collection provide a complete record of its appearance prior to the damage. The conservation and mineralogy departments of the museum collaborated on a project to return the fulgurite to its original form. This poster will track the journey of its reassembly,

including mapping the original shape and dimensions of the specimen, analysis and removal of aged adhesives, and designing a mounting system for future display and storage.

Keywords

conservation, fulgurite, geological collections, collection preservation

Presenting author

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